### ON SOME SOUTH AFRICAN TIPULIDAE

BY

#### E. BERGROTH.

Mr. L. Péringuey, now of Cape Town, has kindly submitted to my examination a small number of Tipulidae from the Cape Colony. Having received from prof. Aurivillius some other, collected by Wahlberg in Caffraria and preserved in the Stockholm Museum, I think it worth recording these species, as there are some remarkable forms among them and our knowledge of the African Tipulidae is extremely limited.

# 1. Dicranomyia tipulipes Karsch, Ent. Nachr. XII, 51 (1886).

Cape Town. — This species was hitherto known only from Pungo Andongo. It is easily distinguished by having the small cross-vein reduced in such a degree, that the submarginal cell is almost in immediate contact with the discal cell at the base of the first posterior cell.

# 2. Dicranomyia consimilis n. sp.

Opaca. Caput canum; antennae capite paullo longiores, subfuscae, articulis rotundatis. Collare et thorax fusca, hoc ad humeros pallescente, pleuris fusco-cinereis. Scutellum et metanotum fusco-cinerea. Alae sat angustae, leviter cinerascentes, vena subcostali annulis duobus latiusculis nigrofuscis signata, uno medio, altero ad initium venae radialis, praefurca basi et apice paullo infuscata, stigmate leviter nigrescente, vena auxiliari paullo ultra

basin venae radialis continuata, vena transversa subcostali apici venae auxiliaris approximata et basi venae radialis opposita, praefurca tantum levissime arcuata, quam petiolus cellulae posticae primae circiter dimidio longiore, vena transversa minore perbrevi, cellula discoidali longa, occlusa. Halteres pallidi, clava obscuriore. Pedes subluteo-fusci, femoribus basi pallidioribus, apice leviter incrassatis sed parum obscurioribus, tibiis apice fuscis. Abdomen fuscum, segmento ultimo pallescente; terebra breviuscula, lamellis superioribus gracilibus, inferioribus magis robustis, medium lamellarum superiorum attingentibus. Long. Q corp. 7 mm., alae 8,5 mm.

Caffraria.

Closely allied to the preceding species, but the small cross-vein is a little longer and the subcostal cross-vein is nearer to the apex of the auxiliary vein and opposite the base of the praefurca. The description of *D. maderensis* Woll is too meagre to allow a closer comparison; it cannot, however, be identical with consinuits

## 3. Rhipidia afra n. sp.

Caput cinereum, linea longitudinali tenuissima obscuriore notatum. Antennae (in Q) moniliformes, capite paullo longiores, subfusculo-testaceae, scapo et articulo ultimo flagelli obscurioribus. Palpi fusci. Collare ochraceum, linea media longitudinali fusca signatum. Thorax ochraceus, fusco-trivittatus, vitta media postice subgemina; pleurae ochraceae, lineis duabus parallelis horizontalibus bene determinatis fuscis ornatae. Scutellum et metanotum cinereo-ochracea, hoc linea media longitudinali paullo obscuriore praedito. Alae sublimpidae, venis transversis pallide fusco-limbatis, omnibus cellulis maculis minutis numerosis subfuscis conspersis, maculis distinctioribus paullo ante medium et ad apicem venae subcostalis, ad basin et apicem praefurcae atque ad apicem venae axillaris, praefurca petiolo cellulae posticae primae duplo longiore, vena transversa majore aliquantulum ante basin cellulae discoidalis sita, cellula basali prima quam secunda longiore. Halteres pallidi, clava apice fusca. Pedes pallide testacei, apice femorum, tibiarum articulorumque trium primorum tarsorum et horum articulis

duobus ultimis totis infuscatis. Abdomen luteo-ochraceum, linea aterali nigro-fusca; terebra brevi, fusca, lamellis superis inferis parum longioribus. Long. Q corp. 7,5 mm., alae 9 mm.

Caffraria.

No species of Rhipidia was hitherto described from Africa.

# 4. Elephantomyia Wahlbergi n. sp.

Caput (fig. 1) puberulum, lurido-cinereum, postice in collum distinctum angustum fuscum continuatum, rostro ceterum corpus longitudine subaequanti, tenui, lineari, subfusco-testaceo. Antennae fuscae, praesertim apicem versus longius pilosae. Collare puberulum, cum thorace et pleuris flavum, linea media dorsali fusca ex apice collaris usque ad basin abdominis percurrente. Scutellum et metanotum fere tota a linea dorsali occupata, tantum lateribus anguste flavida. Alae subhyalinae, stigmate fuscescente. Halteres pallidi, clava apice leviter infuscata. Pedes toti luride testacei. Abdomen alternatim fuscum et flavum, dimidio basali segmentorum fusco, dimidio apicali flavo; propygium flavidum. Long. ocorp. (sine rostro) 5,5 mm., alae 7 mm.

Caffraria.

Allied to *E. Westwoodi* O. S., which is found in North America and once in Europe, but well distinguished by the different colour. The venation of the wings is exactly the same as in *E. Westwoodi*, the wing of which is delineated by Osten Sacken (Monogr. Tab. I, fig. 5). It is the only *Elephantomyia* hitherto found in Africa.

This insect has received its name as a remembrance of its discoverer, the audacious elephant-hunter and indefatigable naturalist, who was killed by an elephant in his manhood's fullest vigour.

# 5. Erioptera Peringueyi n. sp.

Caput luride fuscocinereum. Antennae basin alarum non attingentes, fuscae, articulo primo flavo, articulis flagelli breviter subellipticis. Palpi fusci. Collare flavidum. Thorax nitidus, flavus, sed a vittis tribus latis nitidis nigrofuscis maximam partem occupatus, vittis lateralibus antice breviatis, postice cum vitta media confluentibus. Pleurae obscure fuscae, levissime cinerascen-

tes, sub et paullo pone bases alarum pilis pluribus longis albidis fere cristam formantibus ornatae. Scutellum luteum. Metanotum scutello quadruplo longius, dilutius fuscum, nitidum. Alae hyalinae, macula longa stigmaticali fusca notatae, venis obscuris et obscure pubescentibus, petiolo cellulae submarginalis primae, basi venae radialis, venis transversis omnibus venaque axillari apice excepto fusco-cinereo-limbatis, vena subcostali ante stigma annulo lato flavo signata. Halteres subcinerei, clava dimidio apicali flava, brevissime flavo sericeo-puberula. Pedes, coxis flavis exceptis, subfusco-lutei, femoribus anticis pallidioribus, annulis duobus latis nigrofuscis, uno medio, altero apicali ornatis, femoribus posticis fusconigris, mox pone medium annulo latissimo luteo notatis (pedes intermedii desunt). Abdomen luteo-fuscum, linea laterali et media minus distincta fusconigris. Terebra flava. Long. \$\times\$ corp. 5—7 mm., alae 5,5—7,5 mm.

Cape Town.

This very handsome species belongs to *Erioptera* (O. S.) s. str.

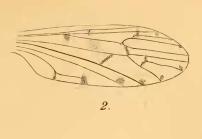
## 6. Erioptera subaurea n. sp.

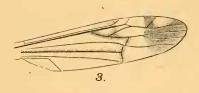
Opaca. Caput ochraceum, linea media longitudinali tenui fusca notatum. Antennae subfusco-flavescentes, scapo pallidiore, articulis flagelli perbrevibus. Palpi fusci. Collare et thorax ochracea, hoc lineis tribus angustis dorsalibus bene determinatis fuscis praedito; pleurae ochraceae, pruina tenui albo-cinerascenti indutae. Scutellum et metanotum ochraceo-subcinerascentia. Alae leviter cinerascentes, venis pallidis et pallide puberulis. Halteres flavidi. Abdomen superne ferrugineo-luteum, linea tenui media fusconigra in medio segmenti penultimi desinente, marginibus segmentorum posticis pallidioribus, subtus subaureo-flavescens. Terebra flava. Long.  $\varphi$  corp. 5 mm., alae 5,5 mm.

Caffraria.

This species also belongs to Erioptera s. str. No species of the genus Erioptera was hitherto known from Africa.

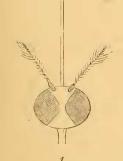














### PODONEURA nov. gen.

Characteres *Psiloconopae* generis, sed vena axillaris furcata, ramo furcae anteriore posteriore multo longiore. Inter cellulas axillarem et spuriam igitur adest cellula axillaris secundaria.

It is necessary to found a new genus upon this insect, for if we leave it in any of the former genera of Eriopterina, it is impossible to say whether it should be referred to Psiloconopa or Symplecta. In the structure of the axillary vein it comes nearer to Symplecta Meig., but the praefurca is very straight and forms an acute angle with the subcostal vein. The last three joints of the antennae also seem to be a little smaller than the preceding ones. If we unite Podoneura with Symplecta or Psiloconopa, we cannot leave the two last mentioned genera separated. The furcation of the last longitudinal vein is a very strange character in the Diptera, and I do not know, indeed, if it have been observed heretofore. — As already suspected by Schiner, there is no real difference between the genera Trimicra O. S. (Gnophomyia Schin. nec. O. S.) and Psiloconopa Zett., and WALLENGREN is evidently right in uniting them. The difference in the three terminal joints of the antennae is so slight, that it is sometimes impossible to say if a specimen should be referred to Trimicra or Psiloconopa,

## 7. Podoneura anthracogramma n. sp.

Caput ochreo-cinereum, rostro cum palpis nigro. Antennae bases alarum vix attingentes, nigrae, articulis duobus primis pallide flavis, articulis flagelli oblongo-ovatis, tribus ultimis magis elongatis. Collare bene evolutum, ochreo-cinereum, linea media longitudinali atra et linea intra margines laterales paullo reflexos minus obscura praeditum. Thorax ochreo-cinereus, lineis tribus dorsalibus bene determinatis atris signatus, lineis lateralibus antice deorsum arcuatis et postice pone suturam aliquantum continuatis, linea media etiam pone suturam continuata, sed ibi multo tenuiore, minus obscura, per scutellum flavocinerum et metanotum cinereum usque ad basin abdominis currente; pleurae cinereae. Alae (fig. 2)

subhyalinae, venis transversis omnibus latius fusco-cinereo-limbatis, maculis fuscocinereis ad basin et apicem praefurcae et ad apices omnium venarum longitudinalium praeter cubitalem et insuper macula magna ceteris pallidiore in dimidio apicali cellulae basalis primae ornatae; vena transversa majore medio alae approximata, longius ante cellulam discoidalem sita, cellula basali prima quam secunda multo longiore. Halteres pallidi, clava nigra, apice cinerea. Pedes nigri, geniculis et annulo pone medium femorum flavis. Abdomen superne badium, linea laterali albida, subtus pallidius; terebra picea. Long. Q corp. 5,5 mm., alae 6,3 mm.

This fine and elegant insect was found near Cape Town by Mr. Péringuey.

# 8. **Gnophomyia elegans** Wied., Auss. zweifl. Ins. II, p. 617 (Limnobia).

Port Natal (BOWKER); Caffraria (WAHLBERG). — In this species the subcostal cross-vein is at a considerable longer distance (twice the length of the great cross-vein) from the tip of the auxiliary vein than in the typical Gnophomyiae. The praefurca also is longer, originating much nearer to the base of the wing than in the other species.

# 9. Gonomyia spuria n. sp.

Gracillima, omnium tenerrima. Caput subfusco cinereum. Antennae fusco-testaceae, apicem versus attenuatae, articulis flagelli subovatis. Palpi fusci. Thorax cum collari, scutello metanotoque chalybeo-canus, unicolor praeter lineas duas tenuissimas parallelas obscuriores e sutura ad finem internam fossarum humeralium perductas, his fossis distinctissimis, oblongulis, obliquis, nigris; pleurae fusco-incanae, nitidulae. Alae leviter cinerascentes, stigmate pallide fuscocinereo; vena auxiliari mox ante basin praefurcae desinente, vena transversa subcostali longe ab apice venae auxiliaris sita, hac distantia quam vena transversa major triplo longiore, praefurca paullo pone medium alae orta, arcuata, quam petiolus cellulae submarginalis primae circiter dimidio longiore, ramo anteriore venae radialis aliquantulum ante apicem venae subcostalis marginem alae attingente, quam ramus posterior qua-

druplo breviore, vena transversa majore longe ante cellulam discoidalem apertam sita. Halteres lutei. Pedes tenuissimi, nitidi, lutei. Abdomen superne fusco-luteum, ventre, segmentis duobus basalibus fuscoluteis exceptis, pallide sulfureo. Long. or corp. 4,5 mm., alae 5 mm.

This species, of an aërial and exceedingly delicate appearance, was found in Caffraria by Wahlberg. It is the first *Gonomyia* found in Africa, and differs from its congenerics by having the subcostal cross-vein at a much longer distance from the tip of the auxiliary vein. I have seen an other *Gonomyia*, more resembling certain european species, from the neighbourhood of Cape Town, but its head being lost, it is unfitted for description.

### 10. Trentepohlia exornata n. sp.

Caput cum palpis et antennis nigrum, his collare nonnihil superantibus, articulo primo longiusculo, cylindrico, lineari, secundo brevi, flagello tenui. Collare antice in collum sat longum prolongatum, fuscum. Thorax antice supra collare tumide prominens, obscure fulvus, vitta media dorsali fusca notatus, postice fuscescens; pleurae fuscae. Scutellum et metanotum nitidiuscula, fusca. Alae (flg. 3) fusco et hyalino variegatae: dimidio basali hyalino praeter prefurcam et venam postbrachialem fuscolimbatas, tum fascia angustiore irregulari fusca per totam latitudinem alae pertracta et venas transversas, cubitalem, radialem prope basin subcostalemque ante apicem occupante, deinde fascia transversa hyalina sat lata, medio tamen angustiore, triente apicali alae, macula hyalina marginem alae tangente in cellula submarginali prima excepta, fusco, etsi marginem posteriorem versus paullo dilutiore; macula hyalina etiam adest in parte ima basali cellulae marginalis; venae alarum fuscae sunt praeter subcostalem flavam, attamen venarum partes in fascia media hyalina currentes pallidissimae sunt, si ab illa cellulam discoidalem apertam a cellula submarginali secunda discernente discesseris, quae fusca est; vena auxiliari paullo ante apicem venae subcostalis desinente, hac vena usque ad fasciam mediam hyalinam crassiore, exinde attenuata et ad venam radialem decurvata, mox ante apicem venulam obliquam ad marginem alae mittente; vena radiali paullo ante medium alae

oriunda, usque ad apicem praefurcae leviter curvata, dein marginem anteriorem alae versus late et sat alte arcuata; vena axillari dimidio basali venae anali valde approximata et cum ea parallela, exin subito ad marginem alae obtusangulariter decurrente; vena transversa majore paullo pone basin cellulae discoidalis apertae suffixa; cellulis posticis tribus. Halteres flavidi. Pedes longissimi, lutei (saltem postici, anteriores desunt), femoribus annulo apicali, tibiis summo apice tarsisque apicem versus fuscis; tibiis posticis nonnihil ante apicem spinulis duabus longiusculis, tenuibus, nigris, aliquantulum distantibus et altera supra alteram posita armatis. Abdomen totum cum propygio fusconigrum. Long. or corp. 6,5 mm., alae 6,8 mm., ped. postic. 26 mm.

Caffraria. Etiam ad sinum Delagoa volitat, unde accepit D. von Röder.

The structure of the propygium is tolerably well visible in the specimen before me. It consists on each side of a stout basal piece, bearing at the end a claw-shaped appendage, directed against the upper side of the basal piece as the half-folded blade of a pen-knife. In the lieving insect they may, however, appear otherwise. The straight style under and between the basal pieces is very conspicuous. This species is no doubt congeneric with Limnobia Trentepohli WIED., an insect upon which BIGOT founded the genus Trentepohlia. It has also the principal characters of the genus Mongoma Westw., but there is no reason for not accepting Biogr's name, this being older than the one given by Prof. Westwood. In T. fragillima Westw., and, according to OSTEN SACKEN, also in T. tenera O. S. and pennipes O. S., the fore femora are armed with two spines near the base. I am unable to say if these spines be present in T. exornata, as the fore legs are wanting in the specimen now before me; but the hind tibiae of exornata have two such spines on their apical portion. The hitherto described species of the genus Trentepohlia may be tabulated thus:

ı (6) Ramus posterior venae praebrachialis furcatus. Cellulae posticae quattuor. Cellula discoidalis clausa. Tarsi albi.

2 (3) Tibiae intermediae apice utrinque breviter albofimbriatae.

— Borneo. pennipes O. S.

- 3 (2) Tibiae intermediae simplices.
- 4 (5) Tibiae totae albae. Ins. Philippinae. tenera O. S.
- 5 (4) Tibiae fuscae, basi et apice albae. Camerun, Madagascar. fragillima Westw.
- 6 (1) Ramus posterior venae praebrachialis simplex. Cellulae posticae tres.
- 7 (10) Cellula discoidalis aperta. Tarsi fusci.
- 8 (9) Abdomen flavum, apice fusco-nigrum. Alae apice fuscae. Sumatra. Trentepohli Wied.
- 9 (8) Abdomen totum fusco-nigrum. Alae apice et fascia transversa media fuscae. Africa australi-orientalis.

exornata Bergr.

10 (7) Cellula discoidalis clausa. Tarsi albi. — Java.

albitarsis Dol.

I think Mr. OSTEN SACKEN is right in removing this genus from the *Limoniina anomala* to the vicinity of *Gonomyia*. The genus *Ischnothrix* Big., said by Bigot to be \*generi *Trichocerae* sat vicinum\*, also seems to be more allied to *Gonomyia*, than to *Trichocera*, although it is provided withocelli.

# 11. Limnophila frugi n. sp.

Caput subfusco-cinereum, postice attenuatum. Antennae bases alarum attingentes, tenues, fuscae, articulo tertio dilute flavo, articulis flagelli tribus primis elongato-subovatis, ceteris linearibus. Palpi fusci. Thorax cum collari et metanoto pallide fusca, unicoloria; pleuris fusco-cinerascentibus. Scutellum luteum. Alae leviter fusco-tinctae, venis et stigmate fuscis; praefurca ad basin leviter arcuata et perpaullo fusco-limbata, ceterum recta; petiolo cellulae submarginalis primae quam praefurca circiter duplo breviore, arcuato; ramo posteriore venae radialis ad apicem alae decurrente; vena axillari apice incurva; vena transversa marginali in medio stigmatis sita, basi cellulae submarginalis primae duplo magis approximata quam apici venae subcostalis; vena transversa majore ad basin cellulae discoidalis suffixa, cellulis posticis quinque; cellula submarginali secunda quam postica prima paullo longiore. Halteres lutei, clava infuscata. Pedes lutei. Abdomen

fusco-luteum, lineis laterali et dorsali fusco-nigris. Long. Q corp. et alae 9 mm.

Caffraria.

The venation much resembles that of L. *lutcipenuis* O. S. (Monogr. Tab. II, f. 10), but the second submarginal cell and the petiole of the second posterior cell are shorter, and the great cross-vein is coincident with the base of the discal cell.

N. B. Limnobia Satsuma Westw., Trans. ent. soc Lond. 1876, p. 504, Tab. III, f. 5 a & 5 b has nothing to do with Limnobia, but seems to belong to the genus Epiphragma O. S. of the Limnophilina, unless it prove to constitute a new genus.

12. Tipula soror Wied., Dipt. exot. p. 24. Cape Town.

# 13. Tipula bonae spei n. sp.

Caput subrhombeum, cinereum, fronte obtuse tumidulo, rostro fuscotestaceo. Antennae breves, capite paullo longiores, articulis duobus basalibus cinerascentibus, flagello fusconigro, articulis paullo elongatis, simplicibus, parce et brevissime pilosis. Palpi nigri. Thorax fuscotestaceus, pone suturam cinereus, dorso vittis tribus nigrofuscis notato, vitta media antrorsum dilatata, pleuris cinereis, inter caput et alarum radices rubiginoso-flavis. Scutellum et metanotum cinereo pruinosa. Alae nigrocinereo-infumatae, vitta media longitudinali per cellulas basalem secundam, discoidalem, basin posterioris tertiae posterioremque secundam extensa hyalina, cellula axillari dimidio basali etiam hyalina. Abdomen fuscocinereum, propygio e latere viso conico, apicem versus fuscotestaceo. Pedes fusci, apice femorum et tibiarum tarsisque fere totis obscurioribus. Long. or corp. et alae 10 mm.

Stellenbosch near Cape Town.

The lamina terminalis infera is extremely prolonged, four or five times longer than the lamina basalis infera; seen from the side it is of a conical shape, tapering towards the tip. The appendages are not well visible. — This small species differs considerably in colour from *T. microcephala* Big. (1858\*) from

<sup>\*</sup> Van der Wulp hos described (1881) an other T. microcephala from Guadaloupe.

Gaboon. The remarkable structure of the propygium distinguishes it from all the few described african Tipulae.

# 14. Tipula pomposa n. sp.

Caput fulvum. Antennae capite vix longiores, fulvae, articulis flagelli, primo excepto, basi nigris et levissime incrassatis. Palpi fuscescentes. Collare fulvum. Thorax cum pleuris fulvoluteus, vittis tribus dorsalibus fuscis nigrolimbatis praeditus, vitta latissima media medio late longitudinaliter nigro-lineata, vittis lateralibus pone suturam continuatis; medio inter apicem collaris et bases alarum adest punctum parvum nigrum. Scutellum et metanotum lutea, vitta media lata longitudinali communi fuscocinnamomea praedita, hac vitta in scutello linea longitudinali tenui pallida divisa, in metanoto pone medium subito valde angustata et deinde solum velut linea tenuis continuata. Ad angulos basales metanoti adest punctum parvum nigrum. Alae rubiginosae, ad marginem anticum saturatiores, utrinque secundum venam praebrachialem magis hyalinae, stigmate pallide fusco, vena transversa majore fuscolimbata, macula minore nigra ad basin venae postbrachialis mox supra venam analem. Halteres fusci, clava nigra. Pedes lutei, annulo apicali femorum nigro, tarsis fuscis. Abdomen, lateribus segmentorum duorum basalium flavidis exceptis, pallide fuscum, dorso saturatiore, linea laterali nigrofusca; ad imam basin abdominis aliquantum pone basin halterum utrinque adest punctum parvum nigrum. Propygium nonnihil incrassatum, maximam partem flavidum, lamina terminali supera (fig. 4) late ampullacea. Long. or corp. et alae 26 mm., ped.postic. 62 mm.

Caffraria.

15. Tipula albovittata Macq., Dipt. exot. I, 1, p. 53; Loew, Berl. ent. Zeitschr. X, 1866, p. 57 (Holorusia). Syn.: Tipula rubiginosa Big. in Maillard, Notes sur l'île de la Réunion, Annexe M., pag. 37.

This species, hitherto only known from the isles of Mauritius and Bourbon, was found in Caffraria by Wahlberg. It is well described by Loew and Bigot II. cc. I have compared the pro-

pygium of T. albovittata with that of the californian T. (Holor.) grandis m. (rubiginosa Loew\*) and find that they are constructed on the same plan. Holorusia can be maintained as a group of the genus Tipula, but certainly not as a distinct genus. — The lamina terminalis supera of T. albovittata is delineated in fig. 5.

# 16. Pachyrrhina antennata WIED., Dipt. exot. p. 28.

Cape Town; Caffraria. — The female, which was unknown to Wiedemann has the antennae, thrice shorter than those of the male, and the black colour in the chest-sides is more extended; the ovipositor is long, very straight and acute. A good character, that escaped Wiedemann, is that the shining black middle band of the thorax is, in both sexes, longitudinally divided by an opaque velvet-black line. The three thoracic bands are also bordered, although less distinctly, by the same opaque black colour; very seldom the opaque middle line is indistinct. *P. aurantiaca* Macq. is not, as Macquart suspected, the female of antennata.

# 17. Pachyrrhina petiolata Macq., Dipt. exot. I, 1, p. 49.

Cape Town; Caffraria. — As Macquart only knew a female without head, it may be noted here, that the head, including the two basal joints of the antennae, is orange-yellow with a somewhat shining lanceolate brownish occipital spot. The antennae of the male reach to the base of the abdomen, those of the female only a little beyond the collare; the joints of the flagellum are black or brown with the slightly incrassated base darker. The chest-sides are variegated with yellow and reddish, the metanotum yellow with a more or less distinct pale reddish brown band at the hind border. The second posterior cell of the wings is in some specimens petiolated, in other sessil.

# 18. Pachyrrhina tincta WALK., Dipt. Saund. p. 444.

Caffraria. — Walker described only the female, I have seen only the male. According to the description the metanotum is

<sup>\* 7.</sup> rubiginosa Loew must be renamed, in order to avoid confusion with rubiginosa Big., the more so as both are Holorusiae.

black with two luteous spots. In the male specimens before me it is vellow with two confluent reddish brown spots at the hind border. I think nevertheless that they belong to WALKER'S species. The broad black transverse band at the tip of the abdomen has a bluish tint. The antennae of the male reach beyond the metanotum, their joints are incrassated at the base. The wings are comparatively short and broad, although longer than in P. brevipennis WOLL.